

3401 Glendale Avenue Suite 300 Toledo, Ohio 43614 (419) 385-2018 fax: (419) 385-5487 EPA Region 5 Records Ctr.

November 12, 1998

Mr. Ron Nabors State of Ohio Environmental Protection Agency Division of Emergency and Remedial Response 347 North Dunbridge Road Bowling Green, Ohio 43402-9398

RE: Analytical Results and Updated Schedule for the Water Treatment System at the Toledo Tie Treatment Plant Ohio ID No. 348-1377 Lucas County KMC001.100.0011

Dear Mr. Nabors:

As requested, enclosed are the analytical results for the sample taken from Williams Ditch on October 13, 1998 (KMC001-BKGD-101398-T348) and the batch treatment effluent sample taken on October 29, 1998 (KMC001-EFF1-102998-T348). A summary table of these analytical results and the corresponding Ohio EPA Surface Water Discharge Standards for Warmwater Habitats is also enclosed. Based on these analytical results, it appears that the effluent's pH level is the only parameter of concern. This will be reanalyzed when I receive the remaining analytical results for the samples taken to date.

On October 29, 1998, Hull & Associates, Inc. (HAI) representatives measured the pH of both effluent storage pools and the effluent from the carbon filter. The pH measured in the field ranged from 9.20 to 9.30 S.U. Since this exceeded the Ohio EPA's Surface Water Discharge Standard for Warmwater Habitats (6.50 – 9.00 S.U.), IT Group decided to lower the pH by adding muriatic acid.

After the acid was added on November 5, 1998, HAI representatives measured the pH in the field using an Orion 1230 pH meter (HAI pH meter) on November 6, 1998. Due to some difficulties with the HAI pH meter that persisted after the HAI pH meter was recalibrated, it was determined that the pH meter was not producing readings that were as precise as the readings from the pH meter used by IT Group. Therefore, IT Group's pH meter was used to obtain the pH readings for both effluent pools. The pH of both effluent pools after the addition of the muriatic acid ranged from 7.58 to 7.76 S.U. Based on these readings and the analytical results enclosed, IT Group discharged this batch treatment (approximately 60,000 gallons) on November 6, 1998.

Per our discussion on November 6, 1998, IT Group began treating water with the intent to begin continuous discharge that day. Per Ohio EPA's request, a HAI representative collected an effluent water sample from the carbon filter effluent sampling tee and measured the pH in the field of the sample and the effluent pool. HAI's field measurement of the pH of the sample and the effluent pool was 9.12 and 9.10 S.U., respectively. As a result, IT Group chose not to begin continuous discharge until the pH in the effluent pools was lowered.

Mr. Ron Nabors November 12, 1998 KMC001.100.0011 Page 2

On November 6, 1998, 0.5 gallons of muriatic acid was added to each effluent pool. On November 9, 1998, a HAI representative collected an influent and effluent water sample. In addition, the HAI representative measured the pH of the influent, the carbon filter effluent, and both effluent pools. Those readings were 7.56, 8.66, 8.85 and 8.74 S.U., respectively. Since the pH readings for each effluent pool and the carbon filter effluent were within the acceptable range for Ohio EPA's Surface Water Discharge Standards, IT Group discharged approximately 60,000 gallons on November 9, 1998.

In order to accommodate further investigation of the storm sewer system along Arco Drive, IT Group has chosen to temporarily cease continuous discharge from the water treatment system. It is anticipated that when continuous discharge is reinitiated, there may not be a sufficient volume of treated water to justify continuous discharge on a daily basis. As a result, HAI representatives will collect an effluent sample only on days that water is discharged, until a total of five continuous discharge effluent samples have been collected. At that point, HAI representatives will collect an effluent sample on a weekly basis for the next eight weeks. After that, an effluent sample will be collected every other week until the water treatment system is no longer in operation. A revised schedule of sampling activities is also enclosed.

Please let me know if you have any questions or concerns. I can be reached at (419) 385-2018.

Sincerely,

Elena R. Tembreull Design Engineer

ERT/jlj

Enclosure

ct:

Mr. Scott Lockhart, P.E., Hull & Associates, Inc.

Mr. Keith Watson, Kerr-McGee Chemical, LLC

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Mr. Peter Goetz, Kerr-McGee Chemical, LLC

Mr. Bill Spedding, OHM Remediation Services, Corp.

Mr. Ralph Dollhopf, USEPA, Region 5

Kerr-Megee Chemical, LLC Toledo Tie Treatment Site Time Critical Removal

Summary of Water Treatment System Analytical Results

	N1 delect	36	Not detected	790	Tiget.	EPA628 8270	ENII KOPIII:NOI.
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>	Not detect	36	Not detected	14300	120	- CS(S(2) 2) =	CHOINE CONTROL
<	Net detect	7,	Not detected	765	F.	DEAGLE ACT	10000010000000000000000000000000000000
٠,٠	Not detect	2.5	350	•	1	13.000.00	CANDELL LITTLE NO.
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اد.	Not detect	10	Not detected	200	10/	El. VOTO: 87:0	- CHEONOT HENOE
}							CH (Printer)
						į	PRIORITY POLLUTANT ACIDS
اد ر	Not detect	% O	Not detected	\$250	ug/L	EPAGEAREAU	VINST CREEK
,,	Not divine	X)	Not detected	•	ny/L	EPA624/K240	RICHLOROFLUOROMETHANE
~	Not detect	40	Not detected	1700	1/20	EPA624/X240	KR HLUKCELHENE
~	Net detect	40	Not detected	2000	ug/L	EPA624/8240	C. LI KICHLOROEIHANE
-	Not detect	40	Not detected	2000	1/8th	EPA624/8240	1,1,1-(RICHEOROGINANE
-	Not detect	40	950	2400	1/811	EPA024/8240	1 Telloui Oboreruavie
-	Not detect	40	Not detected	340	18/1	EFA024/8240	TO LIENE
-	Not detect	40	Not detected	1000	uķ/t	EDA624/0240	TRIBACHI OBORTHENE
	Not detect	88	Not detected	7/00	1	OFTO PETON IN	1.2.2-TETRACHI.OROFTHANE
-	Not detect	40	492	1400		EPA624/8240	METHYLENE CHLORIDE
-	Not detect	à	Not namenan	1400		EPACA/ACAC	THYLBENZENE
-	Not detect	100	Not detected	•	1/01	EPA624/8240	-1,3-DICHLOROPROPENE
- -	Not detect	3 3	Not detected	•	ug/	EPA624/8240	-1,3-DICHLOROPROPENE
- -	Not detect	40	Not detected	•	, gu	EPA624/8240	1,2-DICHLOROPROPANE
- -	Not detect	40	Not detected	•	ug/L	EPA624/8240	-1,2-DICHLOROETHENE
- -	Not detect	40	Not detected	•	1/8n	EPA624/8240	I, I DICHLOROETHENE
- -	Not detect	40	Not detected	12000	ug/L	EPA624/8240	1,2-DICHLOROETHANE
-	Not detect	40	Not detected	•	ug/L	EPA624/K240	1,1-DICHLOROETHANE
- -	Not detect	40	Not detected	•	ng/L	EPA624/8240	DIBROMOCHLOROMETHANE
13	Not detect	80	Not detected	•	ug/L	EPA624/8240	CHLOROMETHANE
-	Not detect	40	Not detected	1800	ug/L	EPA624/K240	CHLOROFORM
2	Not detect	X O	Not detected	•	ug/L	EPA624/8240	2-CHLOROETHYL VINYL ETHER
2	Not detect	80	Not detected	•	ng/L	EPA624/8240	HLOROETHANE
	Not detect	40	Not detected	590	J/Kri	EPA624/8240	CHLOROBENZENE
	Not detect	40	Not detected	0081	ug/L	EPA624/8240	CARBON TETRACHLORIDE
12	Not detect	80	Not detected	•	1/8/1	EPA624/8240	SKOMOMETHANE
-	Not detect	40	Not detected	1500	1/kn	EPA624/8240	BRUMUFURM
-	Not detect	40	Not detected	•	HK/L	EPA624/8240	BROMODICILOROMETHANE
-	Not detect	40	\$00	1160	1/km	EPA624/8240	SENCENE
3	Not detect	200	Not detected	460	ug/1.	EPA624/8240	ACRYLONITRILE
10	Not detect	ነው	Not detected	780	ug/L	EPA624/K240	ACROLEIN
:							PRIORITY POLLUTANT VOLATILES
<u>-</u>	Not detect	_	Not detected	20	ng/C	01001/1007	on the state of th
5	Not detect		Not detected	ار د	Ę.	2007/6010	ARI ENII INI
0.2	Not detect	0.2	Not detected		ug/r	200 7/4/0	MI VED
<u>~</u>	Not detect	>	2	320	ug/F	200 //6010	ALIEN TEV
<u>~</u>	Not detect	\ \ 	10	3200	ug/L	200.7/6010	FAD
-	Not detect	_	-	12	ug/L	200.7/6010	CADMON
10	46	10	296		ug/L	200.7/6010	BARIOM
5	52	5	12.4	360	ug/L	200.7/6010	AXXENIC
0.04	0.36	0.04	479	1.	1/8ut	SM18 4500B5E	PHUSPHURUS
0.005	Not detect	0.005	0 006	0.046	mg/L	4500-C/3353	CYANIDE
\$	Not detect	~	392	10	mg/L	EPA 1664	OIL & GREASE
م ۔	Not detect	<u>~</u>	1180	•	T/gm	SM18-2540D	SÓLIDS, SUSP. 104 DEG C
	8 9X+		7.19+	6.3-9.0	Std	SM18-4500	рН @ 25 DEG C
MDL	RESULT	MDL	RESULT	HABITATS	UNITS	METHOD	ANALYTE NAME
AC001-EFF1-102998-T348 LECTION DATE: 10/29/98	KMC001-EFF1-102998-T348 COLLECTION DATE: 107299	D-101398-T348 DATE: 10/13/98	KMC001-BKGD-101398-T348 COLLECTION DATE: 10/13/98	WATER DISCHARGE WATER DISCHARGE STANDARD OUTSIDE MIXING ZONE MAXIMUM FOR WARMWATER			
				2000		_	

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Kerr-Mcgee Chemical, LLC Toledo Tie Treatment Site Time Critical Removal

Summary of Water Treatment System Analytical Results

	6	Not detect	26	Not detected	[30)	u XVI	EFA 045/02/0	
Fig. 17(2) Fig. 25(2) Wpl. TABLE 7:13 Not detected	وما .	Not detect	2 2	440		ug/L	01.40/04/04	1.2.4-TRICHLOROBENZENE
FACESTRESS EPACSISSTO WpU TABLET-13 Not detected 26 Not detect	-	Not detect	150	1600		1/gu	EPA 625/8270	PARENCHI
Fig. 10, 20, 20, 20, 20, 20, 20, 20, 20, 20, 2	2	Not detect	26	Not detected	290	118/1	EPA 625/8270	BHEN ANTIBENE
THE COUNTRY EPACESSET WyL THE COUNTRY Weldered 26 Meddeed Collect Meddeed Meddeed Collect Meddeed Collect Meddeed Collect Meddeed Collect Meddeed Collect Meddeed Collect Meddeed Me	6	Not detect	26	Not detected	12.4^	ug/L	EPA 625/K270	n-NITROSO-DISHENYI AMINE
PARCESSON_ Wpl. TABLE 7-13 Not deceded 26 Not detect	٥	Not detect	26	Not detected	160^	ug/L	EPA 625/8270	n-NITROSO-DIMETHYLAMINE
No. General Scale No.	٥	Not detect	26	Not detected	•	ug/L	EPA 625/8270	NITROBENZENE
No. Chicago Chicago	o	Not detect	260	7300	160	ug/L	EPA 625/8270	NAPHTHALENE
No. Check-No.	6	Not detect	26	Not detected	6000	1/gu	EPA 625/8270	ISOPIIORONE
No. No.	6	Nut detect	26	40	•	1/811	EPA 625/8270	INDENO(123-cd)PYRENE
NATIONALIEM EPAGES/8770	٥.	Not detect	26	Not detected	•	ug/L	EPA 625/8270	HEXACHLOROETHANE
No. Holchenol. EPA6238270	= ;	Not detect	5	Not detected	•	ug/L	EPA 625/8270	HEXACHLOROCYCLOPENTADIENE
No. Olich Chr. No. Dep. 625/8770 Wg/L SNO	5	Not detect	26	Not detected	500^	T/8n	EPA 625/8270	HEXACHLOROBUTADIENE
No. Collection Collection	5	Not detect	26	Not detected	099	J/gii	EPA 625/8270	HEXACHLOROBENZENE
TABLE 7-13	4	Not detect	12	660	•	ug/L	EPA 625/8270	FLUORENE
TABLE 7-13	الد	Not detect	150	970	200	ug/L	EPA 625/K270	FLUORANTHENE
CHUCHNOPHENOL EPA6258270	6	Not detect	26	Not detected	•	J/Kn	EPA 625/8270	1,2-DIPHENYLHYDRAZINE
CHICKENDIL EPA6258270 ug/L TABLE 7-13 Not detected 26 Not detect	> :	Not detect	26	Not detected		1/8/1	EPA 625/8270	DI-n-OCTYL PHTHALATE
FACE/SEZ70 Ug/L TABLE 7-13 Nich detected 2.6 Nich detect EPAC2/SEZ70 Ug/L TABLE 7-13 Nich detected 2.6 Nich detect EPAC2/SEZ70 Ug/L S200 Nich detected 1.5 Nich detect EPAC2/SEZ70 Ug/L S200 Nich detected 1.5 Nich detect	= :	Not detect	<u>S</u>	Not detected	950	ug/L	EPA 625/X270	2.6-DINTIROTOLUENE
HIJOROPHENOL EPA625/8270 ug/L TABLE 7-13 Not detected 2.6 Not detect CHILOROPHENOL EPA625/8270 ug/L 3700 Not detected 15 Not detect 15 Not d	=	Not detect	2	Not detected	16	ug/L	EPA 625/8270	2,4-DINITROTOLUENE
EPAG238270 Ug/L TABLE 7-13 Net detected 26 Net detect	5 0	Not detect	26	Not detected	350	ug/L	EPA 625/8270	DI-N-BUTYL PHTHALATE
HIJOROPHENOL EPA6238270 ug/L TABLE 7-13 Not detected 26 Not detect	> 0	Not delect	26	Not detected	1700	T/XtI	EPA 625/K270	DIMETHYL PHTHALATE
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Incorphenol	٠	Not delect	36	Not detected	0.2	1/811	EPA 625/8270	3,3'-DICHLOROBENZIDINE
ILLOROPHENOL EPA625/8270 ug/L TABLE 7-13 Not detected 26 Not detect	ء. ا	Not delect	2 2	Not detected	110	ug/I	EPA 625/8270	1,4-DICHLOROBENZENE
Incorphenol	٠,٠	Not delect	2 2	Not detected	250	110/1	EPA 625/8270	1.3-DICHLOROBENZENE
ILLOROPHENOL EPA625/8270	0	Not detect	20	Not detected	160	18/L	EDA 635/8370	1.2-DICHLOROBENZENE
LOROPHENOL EPA625/8270 ug/L Not detected 15 Not detect		Not detect	× 5	130	•	ug/r	EPA 625/8270	DIBENZOYA h) ANTHR ACENE
HLOROPHENOL EPA625/8270	6	Not detect	20	Not detected	•	ug/L	EFA 023/07/0	CHROSCHENIETIETIETIEN
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HLUROPHENOL EPA625/8270 ug/L TABLE 7-13 Not detected 26 Not detect	6	Not detect	26	Not detected	230	1/gii	EPA 023/82/0	DOLLE BENGILLENINALIE
HLOROPHENOL EPA625/8270 ug/L TABLE 7-13 Not detected 26 Not detect	6	Not detect	26	Not detected		ug/L	EPA 625/8270	BITTYI BENZYI BUTTAN ATE
HLOROPHENOL EPA625/8270 ug/L TABLE 7-13 Not detected 26 Not detect	٥	Not detect	26	Not detected	1100	1/gu	EPA 625/8270	DIS(2-ETHYLHEXYL)PHTHALATE
HLOROPHENOL EPA625/8270 ug/L TABLE 7-13 Not detected 26 Not detect	6	Not detect	26	Not detected	4360^	ug/L	EPA 625/8270	bis(2-CHLOROISOPROPYL)ETHER
MCO-INC-KENDL EPA625/8270 ug/L		Not detect	15	Not detected	13.60	1/gu	EPA 625/8270	bis(2-CHLOROETHYL)ETHER
MCO-INC-KENDL EPA 625/8270 ug/L	6	Not detect	26	Not detected	•	ug/L	EPA 625/8270	bis(2-CHLOROETHOXY)METHANE
HLOROPHENOL EPA625/8270 ug/L TABLE 7-13 Not detected 26 Not detect	5	Not detect	26	82		J∕gn	EPA 625/8270	BENZO(k)FLUORANTHENE
MCJ-III-CRESUL EPA625/8270 ug/L TABLE 7-13 Not detected 26 Not detect	٥	Not delect	26	Not detected	•	ug/L	EPA 625/8270	BENZO(ghi)PERYLENE
CO-INC.KESOL EPA625/8270 ug/L	٠,	Not detect	26	20		ug/L	EPA 625/8270	3,4-BENZOFLUORANTHENE
MCO-INC-KENSUL EPA625/8270 ug/L	ه اد	Not detect	15	88	•	ug∕L	EPA 625/8270	BENZO(a)PYRENE
HLOROPHENOL EPA625/8270 ug/L TABLE 7-13 Not detected 26 Not detect	2	Not detect	26	220	•	ug/L	EPA 625/8270	BENZO(a)ANTHRACENE
Not detected 26 Not detect	ارد	Not detect	26	Not detected	0.0053	ug/L	EPA 625/8270	BENZIDINE
MCJ-INCKESOL EPA625/8270 ug/L TABLE 7-13 Not detected 26 Not detect		Not detect	15	190	•	ug/L	EPA 625/X270	ANTHRACENE
MCJ-III-CRESUL EPA625/R270 ug/L TABLE 7-13 Not detected 26 Not detect	4	Not detect	15	100		ug/L	EPA 625/8270	ACENAPHTHYLENE
HLOROPHENOL EPA625/8270 ug/L TABLE 7-13 Not detected 26 Not detect	-	Not detect	150	600	67	ug/L	EPA 625/8270	ACENAPHIHENE
KO-In-CRESOL EPA635/8270 ug/L Not detected 26 Not detect HLOROPHENOL EPA635/8270 ug/L TABLE 7-13 Not detected 26 Not detect CHLOROPHENOL EPA635/8270 ug/L 3300 Not detected 15 Not detect CHLOROPHENOL EPA625/8270 ug/L 16 Not detected 26 Not detect								PRIORITY POLLUTANT BASE/NEUTRALS
KC-m-CRESOL EPA625/8270 ug/L Not detected 26 Not detect *HLOROPHENOL EPA625/8270 ug/L TABLE 7-13 Not detected 26 Not detect *EPA625/8270 ug/L 5300 Not detected 15 Not detect	6	Not detect	26	Not detected	91	ug/L	EPA625/8270	2,4,6-TRICHLOROPHENOL
KU-m-CKESUL EPA625/8270 ug/L Not detected 26 Not detect HLOROPHENOL EPA625/8270 ug/L TABLE 7-13 Not detected 26 Not detect	سا	Not detect	15	Not detected	5300	ug/L	EPA625/8270	PHENOL
EPA625/8270 ug/L Not detected 26	6	Net detect	26	Not detected	TABLE 7-13	ug/L	EPA625/8270	PENTACHLOROPHENOL
	6	Not detect	26	Not detected	•	ug/L	EPA625/8270	p-CHLORO-in-CRESOL
				•				

No Ohio EPA Standard for Warmwater Habitat - Outside Mixing Zone Maximum for this analyta. The standard listed is for Warmwater Habitat - Outside Mixing Zone Human Health 10-day Average.
 Standard determined assuming an everage water hardness of 700 mg/l
 PH result is based on laboratory measurements.

Kerr-Mcgee Chemical, LLC Toledo Tie Treatment Site Time Critical Removal

Proposed Sampling Schedule

(revised as of 11/11/98)

					Approximate
	Approximate	Sample		Turn	Sampling Results
Description	Sampling Date	Description	Analysis	Around	Due Date
Representative Sample	10/13/98	Surface Water	All Parameters	Regular	
Batch Treatment 1	10/29/98	Effluent	All Parameters	Rush	
Effluent Sample	11/6/98	Effluent	All Parameters	Rush	11/12/98
Day I Continuous Discharge	11/9/98	Influent	All Parameters	Rush	11/13/98
Day I Continuous Discharge	11/9/98	Effluent	All Parameters	Rush	11/13/98
Day 2 Continuous Discharge	11/16/98	Effluent	Contaminants of Concern	Regular	11/27/98
Day 3 Continuous Discharge	11/18/98	Effluent	Contaminants of Concern	Regular	11/30/98
Day 4 Continuous Discharge	11/20/98	Effluent	Contaminants of Concern	Regular	12/2/98
Day 5 Continuous Discharge	11/23/98	Effluent	Contaminants of Concern	Regular	12/3/98
Week 2 Continuous Discharge	11/30/98	Effluent	Contaminants of Concern	Regular	12/9/98
Week 3 Continuous Discharge	12/7/98	Effluent	Contaminants of Concern	Regular	12/16/98
Week 3 Continuous Discharge	12/14/98	Influent	All Parameters	Rush	12/23/98
Week 4 Continuous Discharge	12/21/98	Effluent	Contaminants of Concern	Regular	12/30/98
Week 5 Continuous Discharge	12/28/98	Effluent	Contaminants of Concern	Regular	1/6/99
Week 6 Continuous Discharge	1/4/99	Effluent	Contaminants of Concern	Regular	1/13/99
Week 7 Continuous Discharge	1/11/99	Effluent	Contaminants of Concern	Regular	1/20/99
Week 8 Continuous Discharge	1/18/99	Effluent	Contaminants of Concern	Regular	1/27/99
Week 9 Continuous Discharge	1/25/99	Effluent	Contaminants of Concern	Regular	2/3/99
Week 10/11 Continuous Discharge	2/8/99	Effluent	Contaminants of Concern	Regular	2/17/99

- 1. Gray shading indicates sampling events that are not currently anticipated to occur because the operation of the water treatment system should cease on 12/30/98 (based on the current schedule).
- 2. "All Parameters" includes pH, TSS, Oil & Grease, Cyanide, 8 RCRA metals, Phosphorus, VOCs, SVOCs.
- 3. "Contaminants of Concern" will include any of the compounds encompassed by "All Parameters" that were detected at levels that exceed the Ohio EPA's surface water discharge standards. The "Contaminants of Concern" will be based on the representative sample taken directly from Williams Ditch and revised based on the samples taken from the influent to the water treatment system.

NOVEMBER 1998 KMC001.100.0004.XLS

HULL & ASSOCIATES, INC. TOLEDO, OHIO